



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

January 3, 2014

David McMullin
C.S. Mining LLC.
P.O. Box 608
Milford, UT 84751

Subject: Conditional Approval of the Sunrise Amendment to the Notice of Intention to Commence Large Mining Operations, C.S. Mining Inc., Hidden Treasure Mine, M/001/0067, Beaver County, Utah

Dear Mr. McMullin:

The Division of Oil, Gas and Mining conditionally approves mining activities associated with the Sunrise amendment to the Hidden Treasure Notice of Intention to Commence Large Mining Operations (Notice), received November 19, 2013. The permitted disturbance for this Notice is now 448 acres.

The conditions of this approval are as follows:

- 1) R647-4-113.4.11 requires that reclamation sureties be provided by companies having at least an A- rating in A.M. Best's Key Rating Guide. Lexcon no longer has a rating of A- or better. **You are required to comply with this rule by May 3, 2014.**
- 2) The attached comments will need to be addressed as a condition of this approval. **Please submit your response to the attached comments by February 3, 2014.**

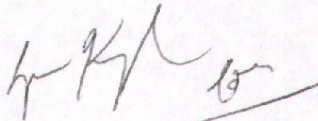
Comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please submit two clean (redline/strikeout removed) copies of the complete and corrected replacement pages. Upon final approval, both copies will be stamped approved, and one will be returned for your records.

The Division is finalizing the review of the revision to the Notice, which includes the addition of acid leach and solution extraction and electro-winning (SX/EW) facilities, and a new tailings disposal facility. The forthcoming revision comments will need to be addressed prior to publishing the revision for public comment.

Page 2 of 8
David McMullin
M/001/0067
January 3, 2014

If you have any questions in this regard please contact me at 801-538-5261 or Peter Brinton, at 801-538-5258. Thank you for your cooperation in completing this permitting action.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul B. Baker", with a long horizontal flourish extending to the right.

Paul B. Baker
Minerals Program Manager

PBB : pnb: eb
Attachment: Review
cc: Bob Bayer (bob@rjbayerpgeo.com)
Ed Ginouves, BLM-Cedar City (eginouve@blm.gov)
P:\GROUPS\MINERALS\WP\M001-Beaver\M0010067-HiddenTreasure\final\APVL-5739-01022014.docx

**REVIEW OF AMENDMENT TO THE NOTICE OF INTENTION
TO COMMENCE LARGE MINING OPERATIONS**

**C.S. Mining LLC.
Hidden Treasure Mine
M/001/0067
January 2, 2014**

General Comments:

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
1	Appendix D Figure 3	<p><u>Previous Comment 5:</u> Detail DT-1 indicates the geotextile is above the tailings, DT-2 shows a typical section of a dike raise and extension of liner. Please provide more details on the HDPE liner, a detail highlighting the existing liner, and the specifications for the liner(s).</p> <p><u>Reply to comment:</u> Done & details pending <u>Follow-up Comment:</u> Please provide a new Figure 6 for review.</p> <p>Division staff will review the recent response to this comment soon, but it is acceptable for conditional approval.</p>	lah CSM lah pnb	

R647-4-105 - Maps, Drawings & Photographs

105.2 - Surface facilities map

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
2	Figure 13a & 13b	<p><u>Previous Comment 48:</u> ...Please show any areas in or around the permit boundaries for which the Operator is not responsible. Please state in the text if any such areas exist. This should help reduce confusion in the future about what areas are inside or outside of the permit boundaries.</p> <p><u>Related Comment:</u> Previously impacted areas shown on these two maps and Figure 1 do not represent the disturbance visible on aerial photographs or exploration permit maps. Refer to the most recent aerial photographs and permit maps, and identify disturbances not yet visible on Figures 13a and 13b, such as disturbance between the Sunrise haul road and the identified previous disturbance on the hill. Proposed and reclaimed exploration disturbance should also be identified as being permitted and bonded disturbance.</p>	pnb	
3	Figures 13a &	<u>Previous Comment 50:</u> Provide additional elevation contours and elevation text for the entire Sunrise area...	pnb	

	13b	<u>Related Comment:</u> Label major contour elevations in the Sunrise pit. Show only the final contours in the area of the pits and dumps.		
4	13a	<u>Previous Comment 57:</u> Provide cross-sections of the Sunrise pit. <u>Related Comment:</u> Since the rules do not specifically require cross-sections for pits, but allow the Division to require them, pit cross-sections will be required in the future.	pnb	

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
5	Figure 15	<u>Previous Comment 20:</u> Provide a hydrology map showing hydrologic structures such as existing and proposed water wells, the four monitoring wells downgradient of the tailings, water rights locations, ditches, berms, culverts, watersheds, flow direction of diverted runoff around pits, tailings ponds, waste dumps, buildings, and other areas of disturbance relative to the location of Hickory Wash. Consider expanding the scale of the map to include ... future tailings storage facilities... This map should be supported with design criteria for all hydrologic structures, including the tailings impoundment, culverts, and ditches, to assure they are designed for peak flow conditions. <u>Related Comment:</u> A Storm Water Pollution Prevention Plan for the current operations was not provided. The current SWPPP map does not make sense with regards to drainage ditches and the underlying contour lines shown on the other figures. As examples, some drainage arrows point uphill in the Bawana area, uphill around the Hidden Treasure dump, and appear to point uphill in the Sunrise dump area. Modify accordingly. The yellow polygon in the Bawana area is incorrect, as it identifies historic dumps as pits.	pnb, aa aa pnb	
6	Figures 12a thru 12e	<u>Previous Comment 55:</u> Geologic lithology and structural maps are needed, and the amount of text required in 106.8 can be reduced with good geological maps. <u>Reply to comment:</u> Done <u>Follow-up Comment:</u> Figures 12b and 12c are upside down and barely readable, please color code to match 12a, show location of pits on the cross sections, and include distance to projection. On Figure 12b, please scan explanation at a higher resolution, so that it is easily readable.	lah CSM lah	
7	Omission	<u>New Comment:</u> Provide a basic sample location map (including depth information) for the Sunrise ABA samples.	pnb	
8	Figure 13b	<u>Previous Comment:</u> The reclamation treatment map (post-reclamation map) for the Sunrise area has not been included. Please provide a map with content similar to 12b. This map needs to be consistent with the Notice's reclamation plan for the Sunrise area.	pnb	

		<u>Related Comment:</u> Indicate that the topsoiled Sunrise dump will be ripped, consistent with the reclamation plan on page 69 of the text.		
--	--	---	--	--

R647-4-106 - Operation Plan

106.3 - Estimated acreages disturbed, reclaimed, annually

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
9	Page 25, Table 1	<u>New Comment:</u> It appears that the acreage between the Sunrise haul road and the Hidden Treasure permit is not included in the acreage associated with the three miles of road reported for the Hidden Treasure haul road. The text (page 70) and aerial photographs indicate that the total haul road length is at least 5.2 miles. Update the table to include the additional acreage.	pnb	

106.4 - Nature of materials mined, waste and estimated tonnages

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
10	Pages 26-28	<u>New Comment:</u> Identify the methods for the two distinct types of acid base analysis used for the Bawana deposit (Net Carbonate Value) and the Sunrise deposit (Sobek?). Replace the acronyms AGP and ANP on pages 27 and 28 relating to the Sunrise deposit with the acronyms used in the Table 3 (MPA and NP).	pnb	
11	Pages 27 & 28, Tables 3&4	Provide the lab analyses for the tabulated ABA data in an appendix.	pnb	
12	Page 28, Table 3	<u>New Comment:</u> Include the calculated net neutralization potential (NNP) and sulfur concentrations, and classify samples based on the calculated NNP and NPR values.	pnb	
13	Page 31, para 2	<u>Previous Comment 88:</u> "Discuss characterization findings for future tailings..." <u>New Comment:</u> Since sulfides are present in the ore prior to processing, and since it is unlikely that all sulfides are removed during flotation, modify the absolute nature of the sentence discussing "non-sulfide-bearing ground ore". Further discuss the characterization of the flotation tailings, which have apparently not been acid leached as have the tailings sample analyzed for the ITDF.	pnb	
14	Page 31 & Appendix D	<u>Previous Comment 89:</u> Discuss the results of past analysis of tailings water... <u>Related Comment:</u> Identify the location and method used to sample the flotation tailings water. Also, provide the water quality sample lab results since they are not found in Appendix D.	pnb	

106.8 - Depth to groundwater, extent of overburden, geology

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
15	Page 45, Table 7	<u>Previous comment 100a:</u> Define MRL in or below the table, and confirm that the MRL values make sense compared to the measured concentrations. Correct accordingly. Identify the sample and analysis dates if it is not obvious in the missing appendix H.	pnb	
16	Page 33 Page 46	<p><u>Previous comment 101:</u> Include a geologic map and cross sections that show structural geology noted in the text. Include orientation of geologic units and structural features. As noted above, per R647-4-105.3.16, geologic lithology and structural maps are needed, and the amount of text required in 106.8 can be reduced with good geological maps. The Notice should also include details about unconsolidated or alluvial material above the bedrock. Depth to bedrock contour maps would be helpful. Details about alluvial fill relates to slope stability of highwalls and to ground water issues. Information about the location, size, and nature of the mineral deposit will be kept confidential if marked confidential.</p> <p><u>Reply to comment:</u> maps provided</p> <p><u>Follow-up Comment:</u> Please see comment above regarding Figures 12a thru 12e. No orientation data has been provided regarding the structural fabric of the rock units, nor has there been any mention of the groundwater in the areas to be mined. If all mine workings are above the phreatic surfaces, simply state in the NOI the known elevation of the phreatic surface versus the elevation of the bottom of the pits. The depth to bedrock maps requested have not been provided. All of the information requested is to support the variance. Currently there is no data to support the variance.</p> <p>Division staff will review the recent response to this comment soon, but it is acceptable for conditional approval.</p>	<p>lah pnb</p> <p>CSM lah</p> <p>pnb</p>	

107.6 - Concurrent reclamation

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
17	Page 53	<u>New Comment:</u> Indicate that regrading of waste rock dump slopes will be done concurrent with mining, as stated on page 11. Also indicate whether placement of topsoil on and ripping of the graded dumps will be done concurrently.	pnb	

R647-4-109 - Impact Assessment

109.1 - Impacts to surface & groundwater systems

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
18	Page 56,	<u>New Comment:</u> Indicate that runoff from the Sunrise and Bawana areas flows to the	pnb	

	para 2	east of the Beaver River, instead of to the Hickory Wash.		
--	--------	---	--	--

109.4 - Slope stability, erosion control, air quality, safety

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
19	Page 43-45	<u>Previous Comment 126:</u> Please provide documentation for pit slope stability, include geomechanical data for each rock type, geotechnical data for each soil type for each pit. Include structural geologic data on map and cross sections. Refer to Section 112 if information required for a variance is provided. <u>Reply to comment:</u> addressed <u>Follow-up Comment:</u> Please submit documentation (as requested in comment above) for variances granted on September 4, 2012.	lah, aa CSM lah	

R647-4-110 - Reclamation Plan

110.2 - Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
20	Page 69, para 3	<u>New Comment:</u> Indicate whether topsoil replacement will be done concurrently or during final reclamation.	pnb	
21	Omission	<u>New Comment:</u> Include the side slope acreages associated with each of the reclaimed mine dumps.	pnb	
22	Page 70	<u>New Comment:</u> Discuss the general anticipated drying times for tailings surfaces.	pnb	

R647-4-112 - Variance (List all variances requested and make a finding if approving.)

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
23	Page 55 Para 1 Page 75	<u>Previous comment 148:</u> Please provide geotechnical/geomechanical details to support the variance to leave highwalls steeper than 45 degrees for the Bawana and Sunrise pits... <u>Reply to comment:</u> Noted <u>Follow-up Comment:</u> Please include a commitment to have an engineer of record review their stability analysis and pit slopes if any of the actual field parameters of the stability model change from the input parameters that were used in the stability model during mining of the pits. This includes the geomechanical properties of the rock and/or the phreatic surface. Please commit to monitor the highwall stability on a regular basis and notify OGM immediately of any stability problems noted by their engineer of record. All other appropriate agencies will be notified as required by those	lah, whw, pnb CSM lah	

		agencies. The Division will be happy to discuss future slope stability requirements. Division staff will review the recent response to this comment soon, but it is acceptable for conditional approval.	pnb	
24	Pages 75-76	Refer to the text of the Notice approved on August 8, 2013, requiring reclamation if no agreement with post-reclamation operation of water infrastructure is reached. The Division will continue to require reclamation should a post-reclamation use for the water facilities not exist. Modify the text accordingly.	pnb	